What is claimed is:

1. An IRM-support complex comprising an IRM compound attached to a macromolecular support material.

2. The IRM-support complex of claim 1, wherein the IRM compound is covalently attached to the macromolecular support material.

3. The IRM-support complex of claim 1, wherein the macromolecular support material is selected from the group consisting of a gel, a foam, a sponge, a fiber, a hydrogel, and a bead.

4. The IRM-support complex of claim 1, wherein the IRM compound is an agonist of at least one TLR.

5. The IRM-support complex of claim 4, wherein the TLR is selected from the group consisting of TLR6, TLR7, TLR8, and combinations thereof.

6. The IRM-support complex of claim 1, wherein the IRM compound is a small molecule immune response modifier.

7. The IRM-support complex of claim 1, wherein the IRM compound is selected from the group consisting of imidazoquinoline amines; tetrahydroimidazoquinoline amines; and imidazopyridine amines; 1,2-bridged imidazoquinoline amines; 6,7-fused cycloalkylimidazopyridine amines; imidazonaphthyridine amines; tetrahydroimidazonaphthyridine amines; oxazoloquinoline amines; thiazoloquinoline amines; oxazolopyridine amines; thiazolopyridine amines; oxazolonaphthyridine amines; thiazolonaphthyridine amines; 1*H*-imidazo dimers fused to pyridine amines, quinoline amines, tetrahydroquinoline amines, naphthyridine amines, or tetrahydronaphthyridine amines; and combinations thereof.

8. The IRM-support complex of claim 1, wherein the IRM compound is selected from the group consisting of purines, imidazoquinoline amides, benzimidazoles, 1*H*-imidazopyridines, adenines, and derivatives thereof.

9. The IRM-support complex of claim 1, wherein the IRM compound comprises a 2-aminopyridine fused to a five-membered nitrogen-containing heterocyclic ring.

10. The IRM-support complex of claim 1, wherein the IRM compound comprises a 4-aminopyrimidine fused to a five-membered nitrogen containing heterocyclic ring.

11. The IRM-support complex of claim 1, wherein the macromolecular support material has an average largest dimension of at least 1 nm.

12. An IRM-support complex comprising an immune response modifier attached to a polymer.

13. The IRM-support complex of claim 12, wherein the immune response modifier is covalently attached to the polymer.

14. The IRM-support complex of claim 13, wherein the polymer is a bioadhesive polymer.

15. A medical article coated with the IRM-support complex of claim 12.

16. A medical article comprising an IRM-support complex, wherein the IRM-support complex comprises an IRM compound attached to a macromolecular support material.

17. The medical article of claim 16, wherein the medical article is selected from the group consisting of a stent, a shunt, an artificial valve, a suture, a surgical clip, a surgical staple, an indwelling catheter, a dental implant, an orthopedic implant, a surgical prosthetic, an implantable vascular access port, an artificial heart, a ventricular assist pump, a blood oxygenator, a blood filter, a hemodialysis unit, a hemoperfusion unit, a conduit tube within a heart lung machine, a tube within a dialysis apparatus, a

tube within a plasmapheresis unit, an artificial pancreas, an artificial liver, an artificial lung, an intraocular lens, and a contact lens.

18. The medical article of claim 17 which is an implantable device.

19. A stent, shunt, or valve comprising a surface having an immune response modifier attached thereto.

20. The stent, shunt, or valve of claim 19, wherein the immune response modifier is covalently attached to the surface of the stent, shunt, or valve.

21. A medical article having disposed thereon an IRM, with the proviso that the medical article is not a periochip.

22. The medical article of claim 21 selected from the group consisting of a stent, a shunt, an artificial valve, a suture, a surgical clip, a surgical staple, an indwelling catheter, a dental implant, an orthopedic implant, a surgical prosthetic, an implantable vascular access port, an artificial heart, a ventricular assist pump, a blood oxygenator, a blood filter, a hemodialysis unit, a hemoperfusion unit, a conduit tube within a heart lung machine, a tube within a dialysis apparatus, a tube within a plasmapheresis unit, an artificial pancreas, an artificial liver, an artificial lung, an intraocular lens, and a contact lens.

23. The medical article of claim 22 which is a stent.

24. A formulation comprising an IRM-support complex comprising a first immune response modifier that is attached to a macromolecular support.

25. The formulation of claim 24 further comprising a second immune response modifier that is not attached to the macromolecular support material.

26. The formulation of claim 24 further comprising a solvent.

27. The formulation of claim 24 which is in the form of a gel.

28. A method of making an IRM-support complex comprising attaching an immune response modifier to a macromolecular support material.

29. The method of claim 28, wherein the immune response modifier is covalently attached to the macromolecular support material.

30. The method of claim 28, wherein the method comprises modifying the IRM to comprise an alkoxysilane moiety.

31. The method of claim 30, wherein the IRM-modified alkoxysilane is attached to a silicon-containing support material.

32. A method of treating a viral infection in a subject comprising administering to the subject an IRM-support complex of claim 1.

33. The method of claim 32, wherein the IRM-support complex is administered orally, nasally, ocularly, vaginally, transcutaneously, or rectally.

34. A method of treating an atopic immune response in a subject comprising administering to the subject an IRM-support complex of claim 1.

35. The method of claim 34, wherein the IRM-substrate is administered orally, nasally, vaginally, ocularly, transcutaneously, or rectally.

36. A method of preventing the restenosis in a subject comprising implanting into the subject a stent having an IRM attached thereto.

37. A method of preventing the restenosis in a subject comprising implanting into the subject a stent having an IRM disposed thereon.

38. The method of claim 37, wherein the IRM compound is an agonist of at least one TLR.

39. The method of claim 38, wherein the TLR is selected from the group consisting of TLR6, TLR7, TLR8, and combinations thereof.

40. The method of claim 37, wherein the IRM compound is a small molecule immune response modifier.

41. The method of claim 37, wherein the IRM compound is selected from the group consisting of imidazoquinoline amines; tetrahydroimidazoquinoline amines; and imidazopyridine amines; 1,2-bridged imidazoquinoline amines; 6,7-fused cycloalkylimidazopyridine amines; imidazonaphthyridine amines; tetrahydroimidazonaphthyridine amines; oxazoloquinoline amines; thiazoloquinoline amines; oxazolopyridine amines; thiazolopyridine amines; oxazolonaphthyridine amines; thiazolonaphthyridine amines; 1*H*-imidazo dimers fused to pyridine amines, quinoline amines, tetrahydroquinoline amines, naphthyridine amines, or tetrahydronaphthyridine amines; and combinations thereof.

42. The method of claim 37, wherein the IRM compound is selected from the group consisting of purines, imidazoquinoline amides, benzimidazoles, 1*H*-imidazopyridines, adenines, and derivatives thereof.

43. The method of claim 37, wherein the IRM compound comprises a 2-aminopyridine fused to a five-membered nitrogen-containing heterocyclic ring.

44. The method of claim 37, wherein the IRM compound comprises a 4-aminopyrimidine fused to a five-membered nitrogen containing heterocyclic ring.

45. A method of modifying the cytokine induction profile of an IRM by attaching the IRM to a macromolecular support complex.

46. The method of claim 45, wherein the cytokine induction profile is modified in favor of interferon α induction.

47. A method of preventing systemic adsorption of an immune response modifier by a subject comprising administering to the subject an IRM-support complex comprising said immune response modifier attached to a macromolecular support material.

48. A method of activating dendritic cells by permitting the cells contact an IRM compound attached to a macromolecular support material.

49. A method of treating solid tumors in a subject comprising administering to the subject an IRM-support complex comprising an IRM compound attached to a macromolecular support material.

50. A method of treating cervical dysplasia in a subject comprising applying to the cervix an IRM-support complex comprising an IRM compound attached to a macromolecular support material.

51. A method of treating bladder cancer in a subject comprising applying to the bladder an IRM support complex comprising an IRM compound attached to a macromolecular support material.